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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/629,243	07/28/2003	Lawrence D. Knox	02103-377003 / AABOSS14-C	6582
26162	7590	08/29/2006	EXAMINER	
FISH & RICHARDSON PC P.O. BOX 1022 MINNEAPOLIS, MN 55440-1022			CULBRETH, ERIC D	
			ART UNIT	PAPER NUMBER
			3616	
DATE MAILED: 08/29/2006				

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/629,243	Applicant(s) KNOX ET AL.	
	Examiner Eric Culbreth	Art Unit 3616	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 12 June 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 2-4, 6-9, 20-26, 68, 69, 71 and 79-83 is/are pending in the application.
- 4a) Of the above claim(s) 79-83 is/are withdrawn from consideration.
- 5) ☒ Claim(s) 20-26 is/are allowed.
- 6) ☒ Claim(s) 2, 3, 8, 9, 68, 69 and 71 is/are rejected.
- 7) ☒ Claim(s) 4, 6 and 7 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 12 June 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Election/Restrictions

1. Upon reconsideration, as claims 8-9 and 23-26 depend from allowed claims, and in view of applicant's cited text on page 12, line 9 that the device of Figure 2a and Figure 2b could be in the same embodiment, these claims are no longer withdrawn.

2. Newly submitted claims 79-83 are directed to an invention that is independent or distinct from the invention originally claimed for the following reasons: These claims are directed to a method of comparing deflection data with stored profiles (claim 79) and modifying profiles (claim 83).

Since applicant has received an action on the merits for the originally presented invention, this invention has been constructively elected by original presentation for prosecution on the merits. Accordingly, claims 79-83 are withdrawn from consideration as being directed to a non-elected invention. See 37 CFR 1.142(b) and MPEP § 821.03.

It is noted the claims originally presented included a vehicle suspension and interaction therewith.

Drawings

3. The drawings were received on 6/12/06. These drawings are approved to expedite prosecution; however, note the objections below.

4. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the features of claim 6 in combination with the features of claims 8-9 and the features of claim 20 in combination with the features of claims 23-26 must be shown or the feature(s) canceled from the claim(s). No new matter should be entered. (Although page 12 of the specification discloses the profile and trajectory plan storage files, microprocessor(s), etc. can be used in the same embodiment, they are not illustrated as claimed in the same figure or embodiment.)

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

5. The drawings are objected to because in Figure 6A (replacement sheet filed 6/12/06), reference numeral 57 should be 157 (pages 15 and 19 of the response filed 6/12/06 state that 57 has been changed to 157 in the replacement sheet of Figure 6A, but this has not been done; also, in the amendment to the three paragraphs beginning at page 14, line 26 filed 6/12/06, 57 has been changed to 157, but again, in Figure 6A 57 has not been changed to 157). Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Specification

6. The disclosure is objected to because of the following informalities:
 - a. In the three paragraphs beginning at page 14, line 26 as amended on 6/12/06, in the line 1 of the third paragraph, "58" should apparently be "157".
 - b. Page 3, lines 1-7 as amended 6/12/06 still contain an incomplete sentence (in line 3, "and" should be inserted before "a controllable suspension element).
 - c. Page 4, lines 1-8 are an incomplete sentence (on page 4, line 5, "includes" should be "including", and on page 4, line 6 "and" should be inserted before "storing").
 - d. Page 4, line 17 – page 5, line 4 are an incomplete sentence ("is disclosed" should be inserted after "a method" in line 17 of page 4).
 - e. Page 5, line 21 – page 6, line 6 is an incomplete sentence ("is disclosed" should be inserted after "a method" in line 21 of page 5).
 - f. Page 6, lines 7-23 as amended 6/12/06 is still an incomplete sentence ("is disclosed" should be inserted after "a method" in page 6, line 7).
 - g. Page 11, lines 6 and 9 are not accurate in reciting points in the payload compartment ("in" should be "on" in both lines).

Appropriate correction is required.

Claim Objections

7. Although claim 79 is not elected, care should be taken in future prosecution to avoid new matter (i.e., there would not appear to be support in the original specification for a "car" as recited in line 2 of the claim).

8. Claims 2-4 and 6-9 objected to because of the following informalities.

- a. In claim 6, line 4 a comma should follow "data".
- b. In claim 7, line 4 a comma should follow "data".
- c. In claim 7, line 12 "travelingwherein" should be spaced.

Appropriate correction is required.

Claim Rejections - 35 USC § 112

9. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

10. Claims 2-3 and 8-9 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

- a. In claim 2, there is no antecedent basis for "said profile storage device".
- b. In claim 3, there is no antecedent basis for "said profile retrieving microprocessor".
- c. In claim 8, last line there is no antecedent basis for "said retrieved profile".
- d. In claim 68, line 7 there is no antecedent basis for "said controllable vehicle suspension" (a controllable suspension element was previously recited in the claim).

Claim Rejections - 35 USC § 102

11. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

12. Claims 68-69 and 71 are rejected under 35 U.S.C. 102(b) as being anticipated by Schubert et al (US005899288A, of record).

Schubert et al discloses a vehicle 2 operating on a road segment with vertical disturbances (bumpiness at column 15, lines 45-46), the vehicle comprising a payload compartment or cab 6, a road engaging device 22, a controllable suspension element 28 and sensors associated with the suspension element for sensing at least one of vertical acceleration, vertical velocity and vertical displacement (column 4, line 59 – column 5, line 7, where sensors 34 detect bumpiness (vertical displacement) of the road surface and are used to adjust performance of at least isolator or suspension element 28). In the text bridging columns 4 and 5 above, data representative of one of the vertical disturbances (bumps) is provided (to a controller) so that a command is issued to the controllable suspension [element] to exert a force related to the vertical disturbance before the road engaging device encounters the vertical disturbance (note column 5, lines 46-47, where the isolators 28-32 of ACS 26 are adjusted in response to estimated conditions ahead of the vehicle)(claim 68). Regarding claim 69, the vehicle would drive over the road segment sensed by sensors 34, and in estimating conditions ahead of the vehicle from the sensors, the data from the sensors would be recorded in the controller or circuit 222 doing the estimating. Regarding claim 71, noting column 15, line 14 – column 17, line 24, the system uses GPS sensors and computerized stored

maps or profiles of where it intends to go to adjust the force of suspension. This would involve retrieving a profile from a library of profiles.

Response to Arguments

13. Applicant's arguments filed 6/12/06 regarding claim 68 have been fully considered but they are not persuasive. In addition to the forces cited by the applicant in the remarks on page 24 of the 6/12/06 amendment, as noted above, Schubert et al also anticipates at column 4, line 59 – column 5, line 7 and column 5, lines 46-47 using signals due to bumpiness to adjust isolator 28 based on conditions estimated ahead of the vehicle, which would include issuing commands to the suspension 28 to exert a force related to vertical displacement or bumpiness.

Allowable Subject Matter

14. Claims 20-26 are allowed.

15. Claims 4 and 6-7 are objected to for the informalities listed above, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

16. Claims 2-3 and 8-9 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

Conclusion

17. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Eric Culbreth whose telephone number is 571/272-6668. The examiner can normally be reached on Monday-Thursday, 9:00-6:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Paul Dickson can be reached on 571/272-6669. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 3616

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Eric Culbreth
Primary Examiner
Art Unit 3616



ec



Approved
EL

8/24/06

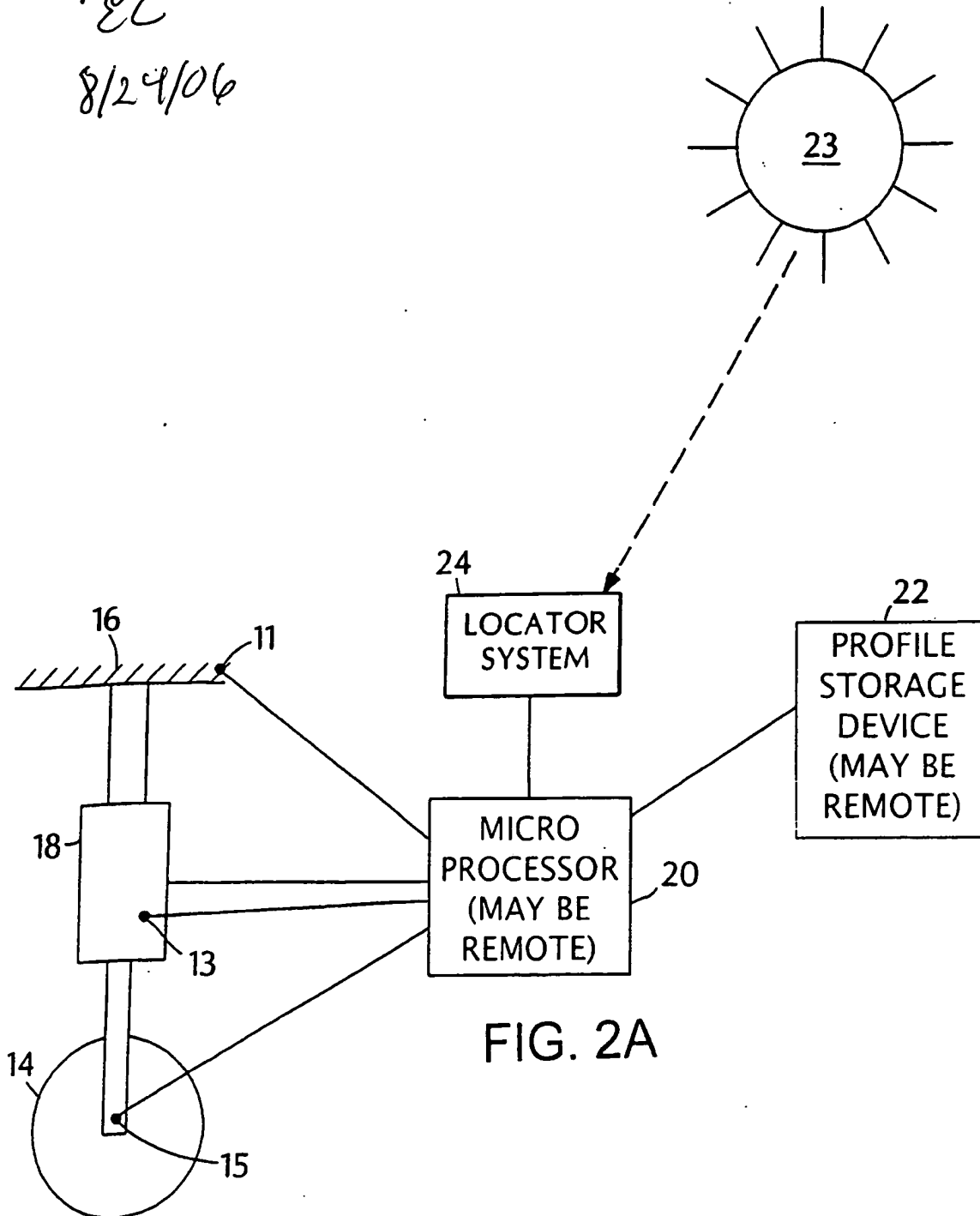


FIG. 2A